

## MATERIAL SAFETY DATA SHEET

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Version 1.3

## Section 1 - Product and Company Information

Product Name BUTYL ACETATE, 99.5+%, A.C.S.  
REAGENT  
Product Number 402842  
Brand ALDRICH

Company Sigma-Aldrich  
Street Address 3050 Spruce Street  
City, State, Zip, Country SAINT LOUIS MO 63103 US  
Technical Phone: 314 771 5765  
Emergency Phone: 414 273 3850 Ext. 5996  
Fax: 800 325 5052

## Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
BUTYL ACETATE	123-86-4	No

Formula C6H12O2  
Synonyms Acetate de butyle (French) \* Acetic acid n-butyl ester \* Butile (acetati di) (Italian) \* Butylacetat (German) \* Butyl acetate (OSHA) \* n-Butyl acetate (ACGIH:OSHA) \* 1-Butyl acetate \* Butylacetaten (Dutch) \* Butyle (acetate de) (French) \* Butylester kyseliny octove (Czech) \* Butyl ethanoate \* Octan n-butylu (Polish)

RTECS Number: AF7350000

## Section 3 - Hazards Identification

## EMERGENCY OVERVIEW

Flammable. Toxic.

Toxic by inhalation. Irritating to respiratory system and skin.

Risk of serious damage to eyes.

Target organ(s): Central nervous system.

## HMIS RATING

HEALTH: 2\*

FLAMMABILITY: 3

REACTIVITY: 0

## NFPA RATING

HEALTH: 2

FLAMMABILITY: 3

REACTIVITY: 0

\*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

## Section 4 - First Aid Measures

#### ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.

#### INHALATION EXPOSURE

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

#### DERMAL EXPOSURE

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

#### EYE EXPOSURE

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

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### Section 5 - Fire Fighting Measures

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#### FLAMMABLE HAZARDS

Flammable Hazards: Yes

#### EXPLOSION HAZARDS

Vapor may travel considerable distance to source of ignition and flash back. Container explosion may occur under fire conditions. Forms explosive mixtures in air.

#### FLASH POINT

72.2 °F 24 °C Method: closed cup

#### EXPLOSION LIMITS

Lower: 1.7 % Upper: 7.6 %

#### AUTOIGNITION TEMP

421 °C

#### FLAMMABILITY

N/A

#### EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

#### FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.  
Specific Hazard(s): Flammable liquid. Vapor may travel considerable distance to source of ignition and flash back.  
Emits toxic fumes under fire conditions.

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### Section 6 - Accidental Release Measures

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#### PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area. Shut off all sources of ignition. Evacuate area and keep personnel upwind.

#### PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

#### METHODS FOR CLEANING UP



Property	Value	At Temperature or Pressure
Molecular Weight	116.16 AMU	
pH	N/A	
BP/BP Range	126 - 127 °C	
MP/MP Range	-78 °C	
Freezing Point	-78 °C	
Vapor Pressure	8 mmHg	20 °C
Vapor Density	4 g/l	
Saturated Vapor Conc.	N/A	
SG/Density	0.881 g/cm <sup>3</sup>	
Bulk Density	N/A	
Odor Threshold	7 - 20 ppm	
Volatile%	N/A	
VOC Content	N/A	
Water Content	< 0.1 %	
Solvent Content	N/A	
Evaporation Rate	1	
Viscosity	0.732 Pas	20 °C
Surface Tension	14.5 mN/m	25 °C
Partition Coefficient	Log Kow: 1.82	
Decomposition Temp.	N/A	
Flash Point	72.2 °F 24 °C	Method: closed cup
Explosion Limits	Lower: 1.7 % Upper: 7.6 %	
Flammability	N/A	
Autoignition Temp	421 °C	
Refractive Index	1.394	
Optical Rotation	N/A	
Miscellaneous Data	N/A	
Solubility	Other Solvents: ACETONE, ETHER, PROPYLENGLYCOL	

N/A = not available

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## Section 10 - Stability and Reactivity

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### STABILITY

Stable: Stable.

Materials to Avoid: Strong oxidizing agents, Strong reducing agents, Strong bases.

### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

### HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

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## Section 11 - Toxicological Information

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### ROUTE OF EXPOSURE

Skin Contact: Causes skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: Causes severe eye irritation.

Inhalation: Toxic if inhaled. Material is irritating to mucous membranes and upper respiratory tract.

Ingestion: May be harmful if swallowed.

### TARGET ORGAN(S) OR SYSTEM(S)

Central nervous system.

## SIGNS AND SYMPTOMS OF EXPOSURE

Exposure can cause: Drowsiness. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## TOXICITY DATA

Oral

Rat

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LD50

4 HRS

Inhalation

Rat

9.6 MG/L TO >29.2 MG/L

LC50

Skin

Rabbit

17,600 mg/kg

LD50

Oral

Rat

10768 mg/kg

LD50

Remarks: Behavioral:Somnolence (general depressed activity).

Lungs, Thorax, or Respiration:Other changes. Liver:Other changes.

Inhalation

Rat

390 ppm

LC50

Remarks: Behavioral:Change in motor activity (specific assay).

Lungs, Thorax, or Respiration:Acute pulmonary edema. Blood:

Hemorrhage.

Oral

Mouse

6000 mg/kg

LD50

Inhalation

Mouse

6,000 mg/m<sup>3</sup>

LC50

Intraperitoneal

Mouse

1230 MG/KG

LD50

Oral

Rabbit

3200 mg/kg

LD50

Skin

Rabbit

> 17600 mg/kg

LD50

Oral

Guinea pig

4700 mg/kg  
LD50

Oral  
Mammal  
4300 mg/kg  
LD50

Inhalation  
Mammal  
40,000 mg/m<sup>3</sup>  
LC50

#### IRRITATION DATA

Eyes  
Rabbit  
Remarks: Moderate irritation effect

Eyes  
Human  
300 ppm

Skin  
Rabbit  
500 mg  
24H  
Remarks: Moderate irritation effect

Eyes  
Rabbit  
100 mg  
Remarks: Moderate irritation effect

#### CHRONIC EXPOSURE - CARCINOGEN

Result: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

#### CHRONIC EXPOSURE - TERATOGEN

Species: Rat  
Dose: 1500 PPM/7H  
Route of Application: Inhalation  
Exposure Time: (7-16D PREG)  
Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Musculoskeletal system.

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#### Section 12 - Ecological Information

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#### ACUTE ECOTOXICITY TESTS

Test Type: EC50 Algae  
Time: 24 h  
Value: 1,200 mg/l

Test Type: EC50 Daphnia  
Species: Daphnia magna  
Time: 24 h  
Value: 72.8 - 205 mg/l

Test Type: LC50 Fish

Species: Lepomis macrochirus (Bluegill)  
Time: 96 h  
Value: 100 mg/l

Test Type: LC50 Fish  
Species: Leuciscus idus  
Time: 48 h  
Value: 64 - 121 mg/l

Test Type: LC50 Fish  
Species: Pimephales promelas (Fathead minnow)  
Time: 96 h  
Value: 17 - 19 mg/l

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## Section 13 - Disposal Considerations

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### APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

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## Section 14 - Transport Information

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### DOT

Proper Shipping Name: Butyl acetates  
UN#: 1123  
Class: 3  
Packing Group: Packing Group II  
Hazard Label: Flammable liquid  
PIH: Not PIH

### IATA

Proper Shipping Name: Butyl acetates  
IATA UN Number: 1123  
Hazard Class: 3  
Packing Group: III

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## Section 15 - Regulatory Information

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### EU DIRECTIVES CLASSIFICATION

R: 10 66 67  
Risk Statements: Flammable. Repeated exposure may cause skin dryness or cracking. Vapors may cause drowsiness and dizziness.  
S: 25  
Safety Statements: Avoid contact with eyes.

### US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Flammable. Toxic.  
Risk Statements: Toxic by inhalation. Irritating to respiratory system and skin. Risk of serious damage to eyes.  
Safety Statements: Keep away from sources of ignition - no smoking. Take precautionary measures against static discharges. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.  
US Statements: Target organ(s): Central nervous system.

### UNITED STATES REGULATORY INFORMATION

SARA LISTED: No  
TSCA INVENTORY ITEM: Yes

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes

NDSL: No

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Section 16 - Other Information

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DISCLAIMER

For R&D use only. Not for drug, household or other uses.

WARRANTY

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